Figure 1

### HIF-1 Regulation by Hypoxia

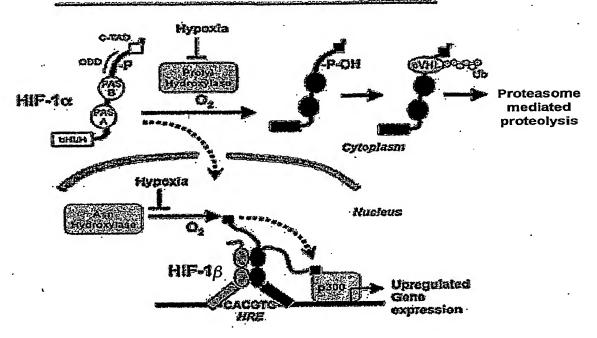


Figure 2

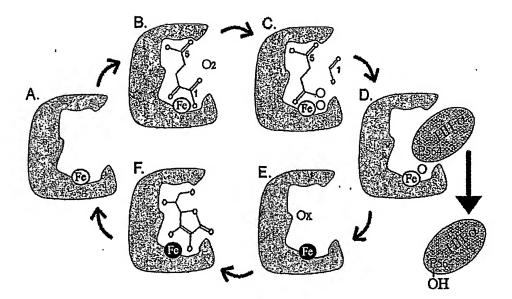
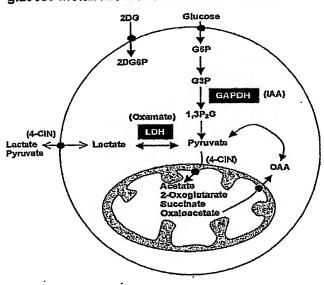


Figure 3

A. Abbreviated diagram of oxygen-independent glucose metabolism and relevant inhibitors.



B. Structural comparisons of key glucose metabolites.

2-0G	Succ	OAA	Pyr		
1 COOH 2 C=0 3 CH2 4 CH2 5 COOH	ÇООН ÇH2 ÇH2 СООН	СООН СН2 СООН	çоон с=о сн₃		

Figure 4

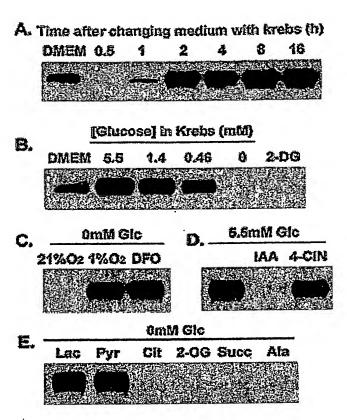


Figure 5

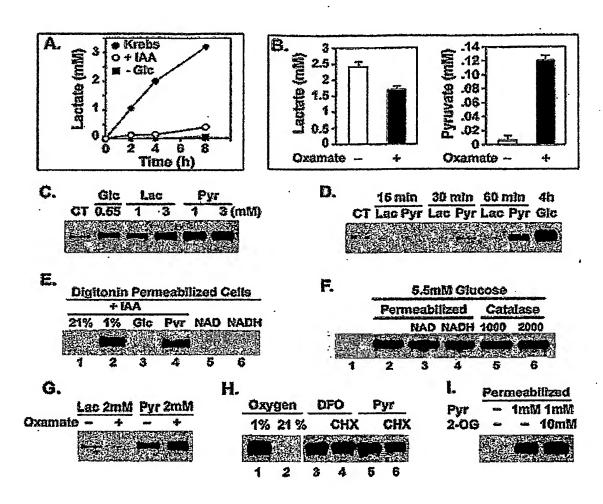


Figure 6

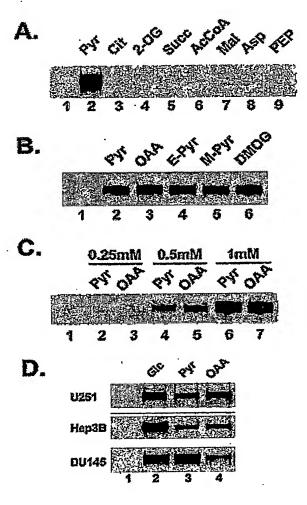


Figure 7

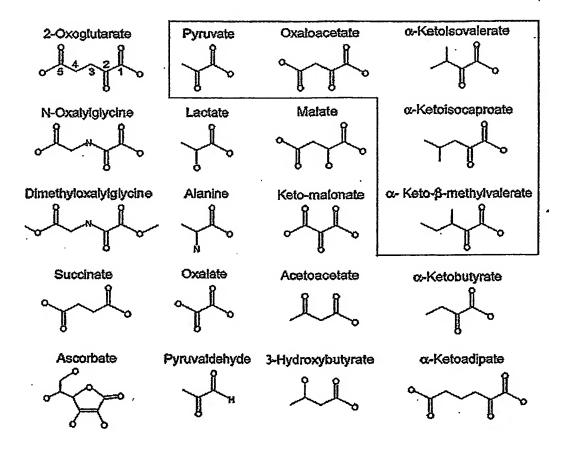
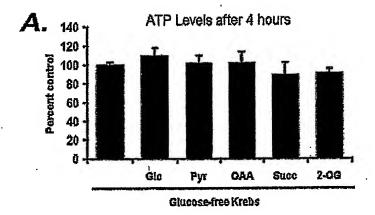


Figure 8



B.
Digitonin permeabilized cells

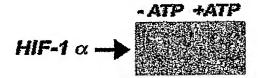


Figure 9

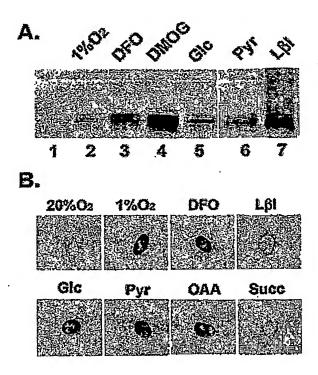


Figure 10

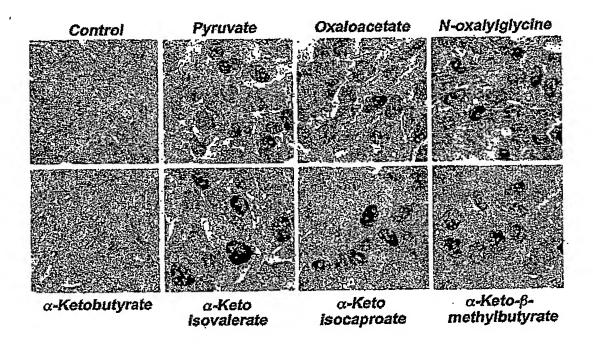


Figure 11

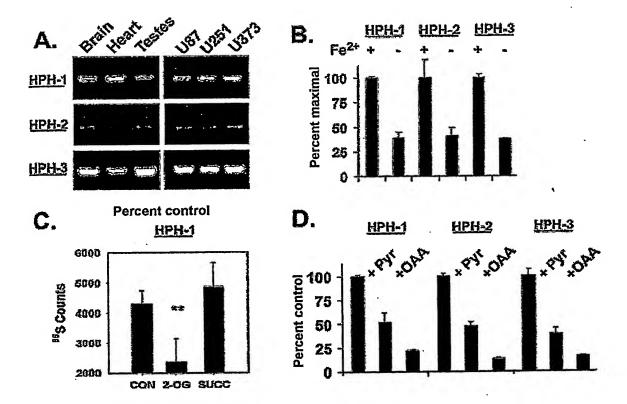


Figure 12

A.	2-OG	(μ <b>M</b> )		3000	1.55 C	and the same	D.	Atto!
	0	0.2	1	5	25	125	•	Contro 2.C
B.	Fe <sup>2+</sup> (						HPH-1	
C.		3.6		33	100	300	<b>НРН-2</b>	
<b>J</b> .2	0	0.2	2 2	20		2000	: HPH-3	

Figure 13

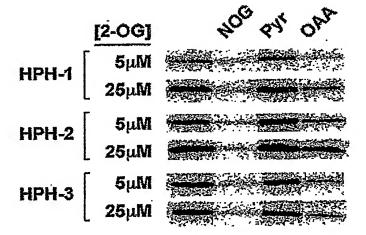


Figure 14

HPH-1				+ 1 mM OAA					+ 1 mN PYK			
: 444	inter-				energie d	ionicko a	and the second		STATE OF THE PARTY.	estation (		
Ascorbate	4	20	100	500	4	20	100	500	4	20	100	500
HPH-2						+ 1 mM OAA			+1 mM, PYR			
Ascorbate	4	20	100	500	4	20	100	500	4	20	100	500
НРН-3			s : 41.		-1	· 1 mM	OAA			+1 r	nM P	YR
ة. د												4000
Ascorbate	8	40	200	1000	8	40	200	1000	. 8	40	200	1000

Figure 15

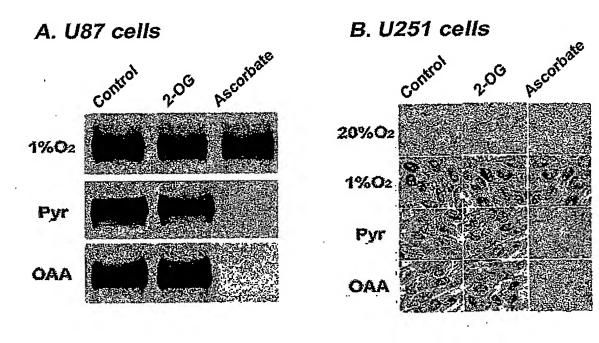


Figure 16

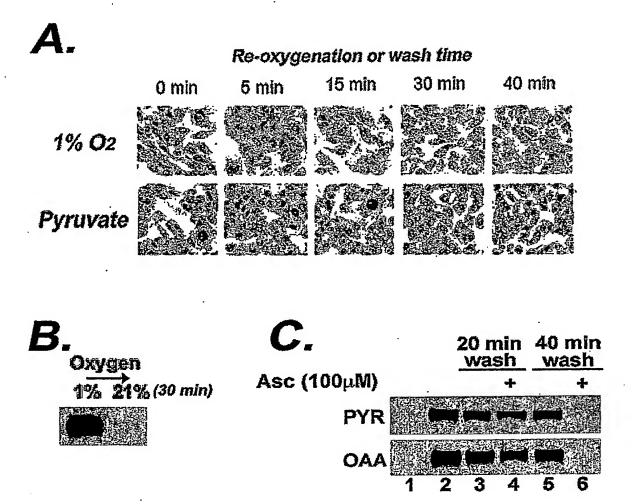


Figure 17

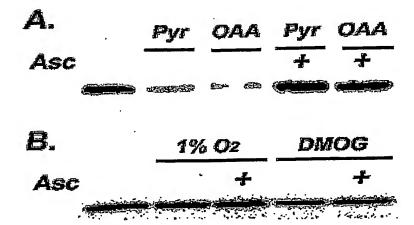


Figure 18

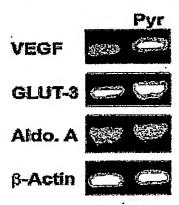
A. FIH-1 expression



B. HIF-1 Gelshift (U87)



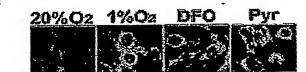
**C. RT-PCR (U87)** 



D. RT-PCR (Hep3B)



E. HRE-GFP Expression



F. HRE-Luciferase expression

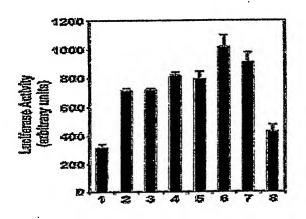


Figure 19

## Ascorbate inhibits HIF-1 mediated gene expression induced by Pyruvate and Oxaloacetate

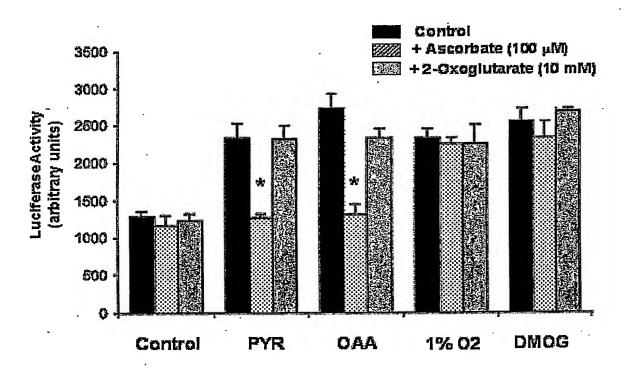


Figure 20

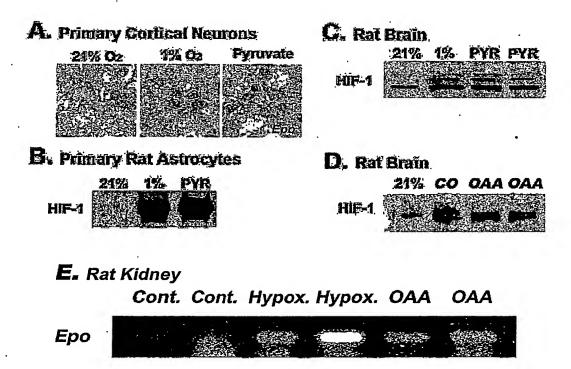
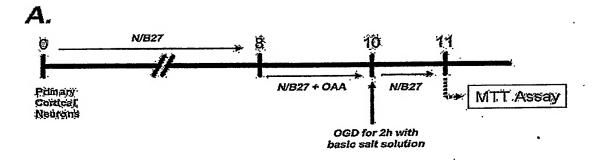
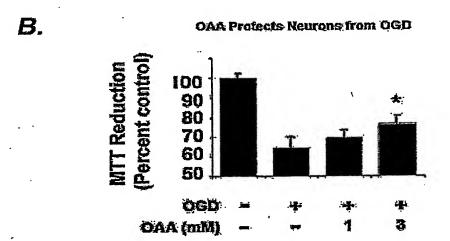


Figure 21





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